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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,358	01/03/2007	Kazuyoshi Kawakami	293399US0PCT	3102

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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REDDY, KARUNA P

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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12/04/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/586,358	<b>Applicant(s)</b> KAWAKAMI ET AL.	
	<b>Examiner</b> KARUNA P. REDDY	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 and 17-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 14-16 and 20-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to the amendment filed 10/23/2009. Claims 1-13, 17-19 are withdrawn from consideration as being drawn to non-elected invention; claim 14 is amended; and claims 21-24 are added. Accordingly, claims 1-24 are currently pending in the application.

This action is made final in light of limitations to the claims that are newly presented following the preceding office action.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Examiner acknowledges applicant's intent to address the obviousness-type double patenting rejection at a later time in the prosecution. However, the rejection will be maintained as set forth in paragraph 4 below until such time that applicants address the obviousness-type double patenting rejection and the arguments are either persuasive or a terminal disclaimer is filed.

### ***Double Patenting***

4. Claims 1-6, 8, 10-11 and 14-18 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 6 and 8 of copending Application No. 11/889,207.

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The rejection is adequately set forth in paragraph 4 of office action mailed 7/23/2009 and incorporated here by reference.

5. Claims 1-6, 8, 10-11 and 14-18 are directed to an invention not patentably distinct from claims 1-4, 6 and 8 of commonly assigned 11/889,207.

The advisory is adequately set forth in paragraph 5 of office action mailed 7/23/2009 and incorporated here by reference.

***Claim Rejections - 35 USC § 103***

6. Claims 14-16, and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al (US 2002/0052438 A1) in view of Feng et al (US 5,977,514) as evidenced by Wypych (Handbook of fillers, 2<sup>nd</sup> Edition).

Ito et al disclose thermoplastic resin composition for laser marking capable of developing chromatic colors containing thermoplastic resin comprising 1 to 100% by weight of a rubber-reinforced resin (A-1) obtained by polymerizing at least one monomer selected from aromatic vinyl compounds, vinyl cyanide compounds, (meth)acrylic esters (i.e. reads on vinyl based monomers of instant claims) in the presence of rubber-like polymer (abstract). The thermoplastic resin reads on rubber-reinforced thermoplastic resin of instant claims.

See example 5 (paragraph 0163), which comprises rubber-reinforced ABS and MBS resin; carbon black (0.3 parts by weight per 100 parts by weight of polymer) and 0.2 parts by weight of phthalocyanine blue per 100 parts by weight of polymer. The

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phthalocyanine blue is based on Cu complex (paragraph 0065) which reads on metal complex backbone of instant claims.

The carbon black absorbs laser light applied to the composition, with the result that carbon black existing at the irradiated part is gasified and the blackness at irradiated part is eliminated or lessened (paragraph 0066) which reads on black substance which is depleted or discolored by receiving a laser beam. The carbon black absorbs laser light, converts light into heat and the generated heat decomposes and expands the (meth)acrylic ester in the thermoplastic resin (paragraph 0068). When laser light is applied to the thermoplastic composition, the irradiated part rises up slightly (i.e. reads on foaming of thermoplastic resin by irradiation) above the non-irradiated part (paragraph 0073). The composition is capable of vividly developing chromatic colors and also excels in impact resistance, heat resistance and molding workability (paragraph 0094).

Ito et al are silent with respect to irradiating with two or more laser beams having different energy levels, plurality of colors and white-based substance; and exothermic peak of chromatic coloring agent.

However, Feng et al teach a method for obtaining light and dark laser marks on colored plastic article by using a composition that comprises (i) a thermoplastic resin, (ii) color pigment that is capable of undergoing color change, (iii) a masking pigment, such as carbon black, and (iv) non-carbon black laser energy absorbing additive such as mica (col. 9, lines 8-13) in amounts of from 0.4% to 0.7% by weight. Evidence that mica is white in color comes from Wypych (page 112) and thus reads on white substance of instant claim 24. Using a laser at certain settings results in charring to produce dark laser marks. At other selected laser settings, the resin foams to produce a light mark on

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a colored background. By varying the laser energy settings (i.e. reads on two or more laser beams having different energy levels), various degrees of both foaming and charring can be achieved on a single plastic article resulting in a multi-colored image produced by various shades of light and/or dark marks against the background color (i.e. reads on markings having plurality of color tones and irradiation in different position on the molded article) (abstract). Suitable lasers include Nd:YAG laser (wavelength 1064 nm) and frequency doubled Nd:YAG laser (wavelength 532 nm) (col. 4, lines 1-8). Therefore, in light of the teachings in Feng et al, it would have been obvious to one skilled in art at the time invention was made to add mica (i.e. white substance) as non-carbon black energy absorbing additive and use two laser beams having different energy levels (i.e. 1064 nm and 532 nm) to produce a multi-colored image (i.e. plurality of colors) comprising various shades of light and/or dark marks against the background color.

With respect to exothermic peak of chromatic coloring agent, given that the chromatic coloring agent (i.e. phthalocyanine blue of example 5) of Ito et al has a metal complex backbone as in the instant claims, it is the examiner's position that exothermic peak of 360<sup>0</sup>C or higher and 590<sup>0</sup>C or lower is inherently present in the chromatic coloring agent (i.e. phthalocyanine blue) of Ito et al.

### ***Response to Arguments***

7. The rejections under 35 U.S.C. § 103 as set forth in paragraph 8 in the preceding office action mailed 7/23/2009 are hereby overcome in light of the amendments and applicant's arguments filed 10/23/2009.

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8. Applicant's arguments filed 10/23/2009 have been fully considered but they are not persuasive. Specifically, applicants argue that instant application and copending application Serial No. 11/889,207 are commonly assigned.

However, as stated earlier, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), show that the conflicting inventions were commonly owned at the time invention in this application was made. See MPEP § 706.02(I)(2).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARUNA P. REDDY whose telephone number is (571)272-6566. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. P. R./  
Examiner, Art Unit 1796

/Vasu Jagannathan/  
Supervisory Patent Examiner, Art Unit 1796